GENERAL NOTES:

1. WITH THE SUBMITTAL OF A BID, THE CONTRACTOR SHALL PROVIDE A SCHEDULE OF VALUES INCLUDING THE IN-PLACE UNIT COST FOR THE RIP-RAP STABLIZATION BERMS (SUBMITTAL 1).
2. THESE DRAWINGS MAY ONLY BE USED FOR THE REPAIR AND REINFORCING OF THE SHEET PILE WALL AT THE "METAL BANK SITE" IN PHILADELPHIA, PA.
3. CONTRACTOR SHALL SUBMIT A CERTIFICATE OF INSURANCE AS SPECIFIED IN SECTION 16 OF THE ENVIRONMENTAL SERVICES AGREEMENT (ATTACHMENT C) (SUBMITTAL 2)
4. ANY PROPOSED CHANGES TO THESE DRAWINGS SHALL BE SUBMITTED IN WRITING TO RA CONSULTANTS LLC FOR REVIEW AND CONSIDERATION.
5. PROPOSED DESIGN CHANGES SHALL CONSIST OF SIGNED AND SEALED DRAWINGS TO SCALE.
6. DIFFERING FIELD CONDITIONS SHALL BE BROUGHT TO THE ATTENTION OF THE CONSTRUCTION MANAGER AND RA CONSULTANTS LLC IMMEDIATELY. MODIFICATIONS TO THESE DRAWINGS MAY BE NECESSARY.
7. CONTRACTOR SHALL SUBMIT A PLAN THAT DESCRIBES THE PROPOSED SEQUENCE OF WORK AND CONSTRUCTION SCHEDULE (SUBMITTAL 3).
8. LOCATION OF EXISTING AND PROPOSED CONDITIONS WERE TAKEN FROM DRAWINGS PROVIDED BY OTHERS (SEE THE "REFERENCES" SECTION BELOW).
9. IT IS THE CONTRACTOR'S RESPONSIBILITY TO VERIFY ALL DIMENSIONS IN THE FIELD.
10. CONTRACTOR SHALL BE RESPONSIBLE FOR PREPARING A SITE HEALTH AND SAFETY PLAN IN ACCORDANCE WITH OSHA REQUIREMENTS (SUBMITTAL 4).
11. PRIOR TO COMMENCING THE WORK, CONTRACTOR SHALL ENSURE PERIMETER FENCE AT THE SITE IS IN PROPER CONDITION TO MAINTAIN SITE SECURITY. REMOVING PORTIONS OF THE FENCE ADJACENT TO THE SHEET PILE WALL MAY BE REQUIRED TO PERFORM THE WORK. IT IS THE CONTRACTOR'S RESPONSIBILITY TO REPAIR OR REPLACE THE FENCE UPON COMPLETION OF THE WORK AS REQUIRED TO RETURN IT TO ITS ORIGINAL CONDITION.
12. THE UPLAND AREA OF THE SITE CONSISTS OF A VEGETATED ENGINEERED SOIL CAP WHICH NEEDS TO REMAIN UNDISTURBED DURING THE COURSE OF THE WORK, INCLUDING DURING ON-SITE HAULING OR THE STAGING OF MATERIALS. CONTRACTOR SHALL BE RESPONSIBLE FOR PROTECTING VEGETATION AND MINIMIZING IMPACTS TO THE GROUND SURFACE. A VEGETATION PROTECTION PLAN SHALL BE REQUIRED WITH THE BID (SUBMITTAL 5).
13. THE CONTRACTOR SHALL SUBMIT PLANS DETAILING THE PROPOSED MATERIALS INCLUDING THE SOURCE OF RIP-RAP, SHOP DRAWINGS FOR THE WALER REPAIR AND PROPOSED REPAIR SEQUENCE AND PROCEDURES (SUBMITTALS 6, 7, AND 8).

MONITORING:

1. CONTRACTOR SHALL SUBMIT A MONITORING PLAN WHICH OUTLINES THE FREQUENCY AND DURATION OF SURVEY MONITORING READINGS DURING ALL ACTIVITIES AS WELL AS ACTIONS TO BE TAKEN IF READINGS EXCEED SPECIFIED THRESHOLDS (SUBMITTAL 9).
   1.1. IF CONTRACTOR OBSERVES MOVEMENT (0.5-IN OR GREATER) OR SUDDEN CHANGES IN THE SHEET PILE WALL OR OTHER STRUCTURES, THE CONSTRUCTION MANAGER AND RA CONSULTANTS LLC SHALL BE NOTIFIED IMMEDIATELY.
   1.2. CONTRACTOR SHALL PERFORM OPTICAL SURVEYS OF THE SHEET PILE WALL USING THE SURVEY MONITORING POINTS (PRISMS) BEFORE AND DURING (2x PER WEEK) THE PERFORMANCE OF THE WORK. SURVEY RESULTS SHALL BE PROVIDED TO THE CONSTRUCTION MANAGER AND RA CONSULTANTS LLC WITHIN 24-HOURS.
   1.3. CONTRACTOR SHALL INSTALL ADDITIONAL SURVEY MONITORING POINTS AROUND THE WALER REPAIR AREA AND PERFORM CONTINUOUS MONITORING DURING ANY DETENSIONING ACTIVITIES.
2. CONTRACTOR SHALL PERFORM A BATHYMETRIC SURVEY OF THE RIVER BOTTOM WITHIN THE WORK AREA PRIOR TO COMMENCING THE REPAIR.
3. TO CONFIRM THAT THE RIP RAP DESIGN SURFACE ELEVATIONS ARE BEING MET, THE CONTRACTOR SHALL PERFORM PERIODIC ELEVATION SURVEYS AS WELL AS A FINAL AS-BUILT SURVEY (SUBMITTAL 10).
4. CONTRACTOR SHALL SUBMIT A PLAN TO CONTROL AND MONITOR TURBIDITY IN THE ACTIVE WORK AREA (SUBMITTAL 11).
5. FOLLOWING THE PLACEMENT OF THE STABILIZING BERM, CONTRACTOR SHALL PROOF TEST A SUBSET OF TIE-RODS IN ACCORDANCE WITH POST TENSIONING INSTITUTE (PTI) RECOMMENDATIONS AS SUMMARIZED BELOW (SUBMITTALS 12 AND 13).
   5.1. A MINIMUM OF 10 TIE-RODS SHALL BE PROOF TESTED. ALL FIVE TIE-RODS WITHIN THE WALER REPAIR AREA SHALL BE PROOF TESTED (SEE FIGURE 3, DETAIL E, NOTE 4). IN ADDITION, A MINIMUM OF 5 ADDITIONAL TIE-RODS SHALL BE PROOF TESTED IN OTHER AREAS OF THE SHEET PILE WALL. REFER TO FIGURE 2 FOR PREFERRED AND ALTERNATE TIE-ROD TESTING LOCATIONS. ADDITIONAL TIE-ROD TESTING MAY BE REQUIRED IF THE CREEP MOVEMENT EXCEEDS THE CRITERIA DESCRIBED BELOW.
   5.2. IT IS THE CONTRACTOR'S RESPONSIBILITY TO ERECT A TESTING APPARATUS THAT CAN DIRECTLY MEASURE THE MOVEMENT OF THE ANCHOR WITHOUT ANY EXTERNAL INTERFERENCE. THE TESTING APPARATUS SHALL BE CAPABLE OF MEASURING MOVEMENTS TO 1/1000-INCH.
   5.3. THE PROOF TEST SHALL BE CONDUCTED BY INCREMENTALLY LOADING THE ANCHOR IN ACCORDANCE WITH THE STEPS BELOW. TOTAL MOVEMENT READINGS SHALL BE RECORDED AFTER REACHING EACH LOADING INCREMENT.
   5.4. DURING THE LOAD HOLD PERIODS, CONTRACTOR SHALL RECORD TIE-ROD ELONGATION. THE ANCHOR LOAD SHALL NOT BE ALLOWED TO DEVIATE FROM THE TEST PRESSURE BY MORE THAN 50-PSI.
   5.5. REFER TO FIGURE 2 FOR THE CALCULATED DESIGN LOADS (DL) FOR EACH TIE-ROD.
   5.6. PROOF TEST STEPS:
      5.6.1. ALIGNMENT LOAD (TYPICALLY 0.1 x DL)
      5.6.2. 0.25 x DL
      5.6.3. 0.50 x DL
      5.6.4. 0.75 x DL
      5.6.5. 1.00 x DL
      5.6.6. 1.20 x DL
      5.6.7. 1.33 x DL (TEST LOAD. 10-MINUTE HOLD). HOLD THE LOAD CONSTANT FOR 10-MINUTES. TOTAL MOVEMENT READINGS SHALL BE RECORDED AT 1, 2, 3, 4, 5, 6, AND 10-MINUTES AFTER REACHING THE TEST LOAD.
   5.7. IF THE TEST STEP LOADS CANNOT BE MAINTAINED, THE TIE-ROD HAS FAILED AND RA CONSULTANTS LLC MAY DETERMINE THAT ADDITIONAL TESTING AND REPAIR WORK MAY BE NECESSARY.
   5.8. IF THE TOTAL CREEP MOVEMENT BETWEEN 1 AND 10-MINUTES IS LESS THAN 0.040-IN, THE TEST IS COMPLETE. ADJUST TO LOCK-OFF LOAD. UNLESS OTHERWISE SPECIFIED BY RA CONSULTANTS LLC, LOCK-OFF LOADS SHALL BE EQUAL TO THE ANCHOR DESIGN LOADS.
   5.9. IF THE TOTAL CREEP MOVEMENT BETWEEN 1 AND 10-MINUTES EXCEEDS 0.040-IN, THE TEST LOAD THEN SHALL BE MAINTAINED FOR AN ADDITIONAL 50-MINUTES AND THE MOVEMENT READINGS SHALL BE RECORDED AT 20, 30, 40, 50, AND 60-MINUTES.
   5.10. IF THE CREEP MOVEMENT BETWEEN 10- AND 60-MINUTES IS LESS THAN 0.040-IN, OR THE TOTAL CREEP MOVEMENT IS LESS THAN 0.080-IN, THE TEST IS COMPLETE. ADJUST TO LOCK-OFF LOAD.
   5.11. IF THE 10-MINUTE CREEP MOVEMENT EXCEEDS 0.040-IN AND THE 60-MINUTE CREEP MOVEMENT EXCEEDS 0.080-IN, RA CONSULTANTS MAY DETERMINE THAT ADDITIONAL TESTING AND REPAIR WORK MAY BE NECESSARY.
   5.12. RA CONSULTANTS LLC OR A DESIGNATED REPRESENTATIVE SHALL BE ON SITE TO OBSERVE THE TIE-ROD PROOF TESTS AND RECORD THE MOVEMENT READINGS.
6. IF CONTRACTOR CHOOSES TO USE HEAT TO CUT THE WALER, A SUBMITTAL WILL BE REQUIRED TO ENSURE APPROPRIATE MONITORING OF TEMPERATURE IN THE STEEL (INCLUDE MONITORING PROGRAM WITHIN SUBMITTAL 7).

WELDING:

1. MAKE TACK WELDS WITH THE SAME TYPE OF ELECTRODE AND INCORPORATE INTO THE FINAL WELD. NO OTHER TACK WELDING WILL BE PERMITTED.
2. DO NOT WELD WHEN SURFACES TO BE WELDED ARE MOIST OR EXPOSED TO RAIN, SNOW, OR WIND, OR WHEN WELDERS ARE EXPOSED TO INCLEMENT CONDITIONS THAT WILL ADVERSELY AFFECT THE QUALITY OF WORK.
3. DO NOT WELD OR BURN WHEN THE TEMPERATURE IS BELOW 0°F. PREHEAT AND MAINTAIN THE TEMPERATURE OF THE METAL TO AT LEAST 70°F WHEN THE TEMPERATURE OF THE METAL IS BETWEEN 0° AND 32° DURING WELDING OR BURNING. PREHEAT THE STEEL TO THE SPECIFIED MINIMUM TEMPERATURE FOR A DISTANCE EQUAL TO THE THICKNESS OF THE PART BEING WELDED, BUT NOT LESS THAN 3-INCHES IN ALL DIRECTIONS FROM THE POINT OF WELDING.
4. PRIOR TO PLACING THE WELD, THOROUGHLY CLEAN ALL PORTIONS OF NEW AND EXISTING SURFACES TO RECEIVE WELD OF ALL FOREIGN MATTER, INCLUDING PAINT FILM, FOR A DISTANCE OF 2-INCHES FROM EACH SIDE OF THE OUTSIDE LINES OF THE WELD.

REFERENCES:

1. ALL ELEVATIONS ARE REFERENCED TO THE NORTH AMERICAN VERTICAL DATUM OF 1988 (NAVD 88).
2. BASE PLANS AND SECTIONS ARE DEVELOPED FROM:
   2.1. "AS BUILT SURVEY OF TIE BACKS AUGUST 11, 2009" BY RETTEW ASSOCIATES, INC. DATED 8/14/2009
   2.2. "BATHYMETRIC PLOT" BY RETTEW ASSOCIATES, INC. DATED 2/20/2015.
   2.3. "SHEETPILE WALL SECTIONS" BY AMEC EARTH & ENVIRONMENTAL, INC. DATED 9/6/2002.

SELECTED APPLICABLE STANDARDS:
1. PTI - RECOMMENDATIONS FOR PRESTRESSED ROCK AND SOIL ANCHORS.
2. ANSI AWS D1.1 - STRUCTURAL WELDING CODE - STEEL

LIST OF DRAWINGS:

1. FIGURE 1 - GENERAL NOTES
2. FIGURE 2 - STABILIZING BERM PLAN
3. FIGURE 3 - WALER REPAIR PLAN, SECTIONS, AND DETAILS
4. FIGURE 4 - STABILIZING BERM SECTIONS

TABLE OF REQUIRED SUBMITTALS
THE FOLLOWING TABLE SUMMARIZES THE MINIMUM REQUIRED SUBMITTALS. THE CONTRACTOR SHALL ISSUE THE SUBMITTALS WITH THE BID OR FOLLOWING AWARD OF THE BID, AS INDICATED IN THE TABLE BELOW.

SUBMITTAL NO.	NOTE	DESCRIPTION	DUE DATE
1	GENERAL #1	SCHEDULE OF VALUES: CONTRACTOR SHALL SUBMIT A SCHEDULE OF VALUES INCLUDING THE IN-PLACE UNIT COST FOR THE RIP-RAP STABLIZATION BERMS.	WITH BID
2	GENERAL #3	CERTIFICATE OF INSURANCE: CONTRACTOR SHALL SUBMIT A CERTIFICATE OF INSURANCE IN ACCORDANCE WITH REQUIREMENTS OF GENERAL NOTE #3.	WITHIN 7 CALENDAR DAYS OF CONTRACT AWARD
3	GENERAL #7	SEQUENCE OF WORK AND CONSTRUCTION SCHEDULE: CONTRACTOR SHALL SUBMIT A GENERAL SEQUENCE AND SCHEDULE FOR THE WORK OUTLINED ON THESE DRAWINGS.	WITH BID
4	GENERAL #10	HEALTH AND SAFETY PLAN: CONTRACTOR SHALL SUBMIT A HEALTH AND SAFETY PLAN WHICH COMPLIES TO ALL APPLICABLE LAWS AND REGULATIONS.	WITHIN 15 CALENDAR DAYS OF CONTRACT AWARD
5	GENERAL #12	VEGETATION PROTECTION PLAN: CONTRACTOR SHALL SUBMIT A PLAN OUTLINING THE APPROACH TO PROTECT THE VEGETATED ENGINEERED SOIL CAP FROM DAMAGE DURING PLANNED SITE ACTIVITIES. THE PLAN SHALL ALSO INCLUDE THE PROPOSED LOCATION OF ON-SITE HAULING ROUTES AND MATERIALS STAGING AREAS AND THE MEANS AND METHODS PROPOSED TO PREVENT DAMAGE TO THE VEGETATED ENGINEERED SOIL CAP IN THOSE AREAS.	WITH BID
6	GENERAL #13	MATERIALS: CONTRACTOR SHALL SUBMIT CUT-SHEETS, SPECIFICATIONS, AND SOURCE CERTIFICATIONS, AS APPROPRIATE FOR ALL PERMANENT MATERIALS TO BE USED IN PERFORMING THE WORK OUTLINED ON THESE DRAWINGS. THIS INCLUDES BUT IS NOT LIMITED TO R6 RIP-RAP, STEEL WALERS, AND MISCELLANEOUS STEEL PLATES.	WITH BID
7	GENERAL #13 & MONITORING #6	WALER REPAIR SEQUENCE AND PROCEDURES: CONTRACTOR SHALL SUBMIT A PLAN DETAILING THE WALER REPAIR & REINFORCEMENT SEQUENCE AND PROCEDURES.	WITH BID
8	GENERAL #13	WALER REPAIR SHOP DRAWINGS: CONTRACTOR SHALL SUBMIT SHOP DRAWINGS DETAILING THE PROPOSED WALER REPAIR & REINFORCEMENT.	WITHIN 15 CALENDAR DAYS OF CONTRACT AWARD
9	MONITORING #1	MONITORING PLAN: CONTRACTOR SHALL SUBMIT A MONITORING PLAN WHICH OUTLINES THE FREQUENCY AND DURATION OF SURVEY MONITORING READINGS DURING ALL ACTIVITIES AS WELL AS ACTIONS TO BE TAKEN IF READINGS EXCEED SPECIFIED THRESHOLDS.	WITH BID
10	MONITORING #3	RIP RAP ELEVATION SURVEY PLAN: CONTRACTOR SHALL SUBMIT A PLAN DETAILING THE FREQUENCY, MEANS, AND METHODS OF RIP RAP ELEVATION SURVEYS TO CONFIRM THE BERM PLACEMENT IS ACHIEVING THE REQUIRED ELEVATION AND SLOPE AND TO DOCUMENT AS-BUILT CONDITIONS AT THE COMPLETION OF THE WORK.	WITH BID
11	MONITORING #4	TURBIDITY CONTROL PROGRAM: CONTRACTOR SHALL SUBMIT MEANS AND METHODS OF CONTROLLING TURBIDITY IN THE RIVER WHILE PERFORMING THE WORK OUTLINED ON THESE DRAWINGS.	WITH BID
12	MONITORING #5	TIE-ROD TESTING QUALIFICATIONS: THE CONTRACTOR SHALL SUBMIT THE QUALIFICATIONS OF THE PERSONNEL PERFORMING THE TESTS DEMONSTRATING THAT THE PERSONNEL HAVE SUCCESSFULLY PERFORMED SIMILAR TESTS ON PREVIOUS PROJECTS.	WITH BID
13	MONITORING #5	TIE-ROD TESTING PROGRAM: THE CONTRACTOR SHALL SUBMIT A TESTING PROGRAM FOR THE TIE-RODS COMPLYING WITH THE NOTES ON THIS FIGURE. PLAN SHALL INCLUDE AT A MINIMUM THE LOCATION OF THE TIE-RODS TO BE TESTED AND THE TESTING PROCEDURE.	WITH BID

KEY PLAN

NOT TO SCALE

REV.	DATE	DETAILS
	7/24/15	REVISED REPAIR DETAILS
	4/16/15	REVISED REPAIR DETAILS
	3/6/15	NEW BATHYMETRIC SURVEY

PROJECT

METAL BANK SITE
PHILADELPHIA, PA

TITLE

GENERAL NOTES

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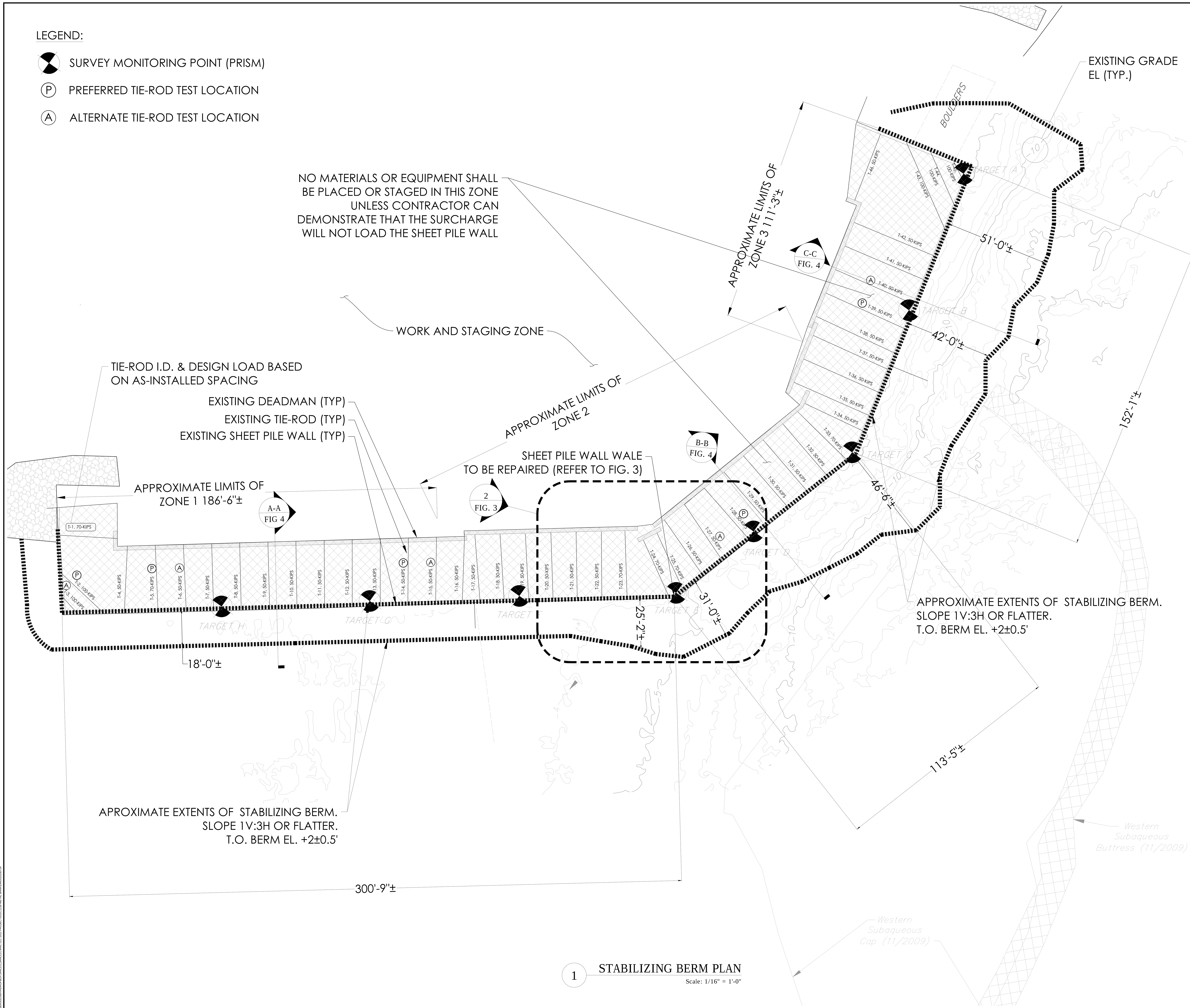
DATE:	1 OCTOBER, 2014
PROJ. NO.:	12C1135
DRAWN BY:	JR / JJC
CHECKED BY:	WJP
DRAWING:	FIGURE 1
SHEET:	SHEET 1 OF 4


LEGEND:
SURVEY MONITORING POINT (PRISM)
P PREFERRED TIE-ROD TEST LOCATION
A ALTERNATE TIE-ROD TEST LOCATION
NO MATERIALS OR EQUIPMENT SHALL BE PLACED OR STAGED IN THIS ZONE UNLESS CONTRACTOR CAN DEMONSTRATE THAT THE SURCHARGE WILL NOT LOAD THE SHEET PILE WALL
WORK AND STAGING ZONE
TIE-ROD I.D. & DESIGN LOAD BASED ON AS-INSTALLED SPACING
EXISTING DEADMAN (TYP)
EXISTING TIE-ROD (TYP)
EXISTING SHEET PILE WALL (TYP)
APPROXIMATE LIMITS OF ZONE 1 186'-6"±
APPROXIMATE LIMITS OF ZONE 2
APPROXIMATE LIMITS OF ZONE 3 111'-3"±
SHEET PILE WALL WALE TO BE REPAIRED (REFER TO FIG. 3)
A-A FIG 4
B-B FIG. 4
C-C FIG. 4
2 FIG. 3
EXISTING GRADE EL (TYP.)
BOULDERS
T-1, 70-KIPS
T-2, 100-KIPS
T-3, 100-KIPS
T-4, 50-KIPS
T-5, 70-KIPS
T-6, 50-KIPS
T-7, 50-KIPS
T-8, 50-KIPS
T-9, 50-KIPS
T-10, 50-KIPS
T-11, 50-KIPS
T-12, 50-KIPS
T-14, 50-KIPS
T-15, 50-KIPS
T-16, 50-KIPS
T-17, 50-KIPS
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T-20, 50-KIPS
T-21, 50-KIPS
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T-36, 50-KIPS
T-37, 50-KIPS
T-38, 50-KIPS
T-39, 50-KIPS
T-40, 50-KIPS
T-41, 50-KIPS
T-42, 50-KIPS
T-43, 100-KIPS
T-44, 100-KIPS
T-46, 50-KIPS
TARGET A
TARGET B
TARGET C
TARGET D
TARGET E
TARGET F
TARGET G
TARGET H
51'-0"±
42'-0"±
46'-6"±
31'-0"±
25'-2"±
18'-0"±
152'-1"±
113'-5"±
300'-9"±
APPROXIMATE EXTENTS OF STABILIZING BERM. SLOPE 1V:3H OR FLATTER. T.O. BERM EL. +2±0.5'
APROXIMATE EXTENTS OF STABILIZING BERM. SLOPE 1V:3H OR FLATTER. T.O. BERM EL. +2±0.5'
Western Subaqueous Buttress (11/2009)
Western Subaqueous Cap (11/2009)

1 STABILIZING BERM PLAN
Scale: 1/16" = 1'-0"

KEY PLAN

NOT TO SCALE

REV.	DATE	DETAILS
	7/24/15	REVISED REPAIR DETAILS
	4/16/15	REVISED REPAIR DETAILS
	3/6/15	NEW BATHYMETRIC SURVEY

PROJECT
METAL BANK SITE
PHILADELPHIA, PA

TITLE
STABILIZING BERM PLAN

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SEAL AND SIGNATURE

DATE: 1 OCTOBER, 2014
PROJ. NO.: 12C1135
DRAWN BY: JR / JJC
CHECKED BY: WJP
DRAWING: FIGURE 2
SHEET: SHEET 2 OF 4

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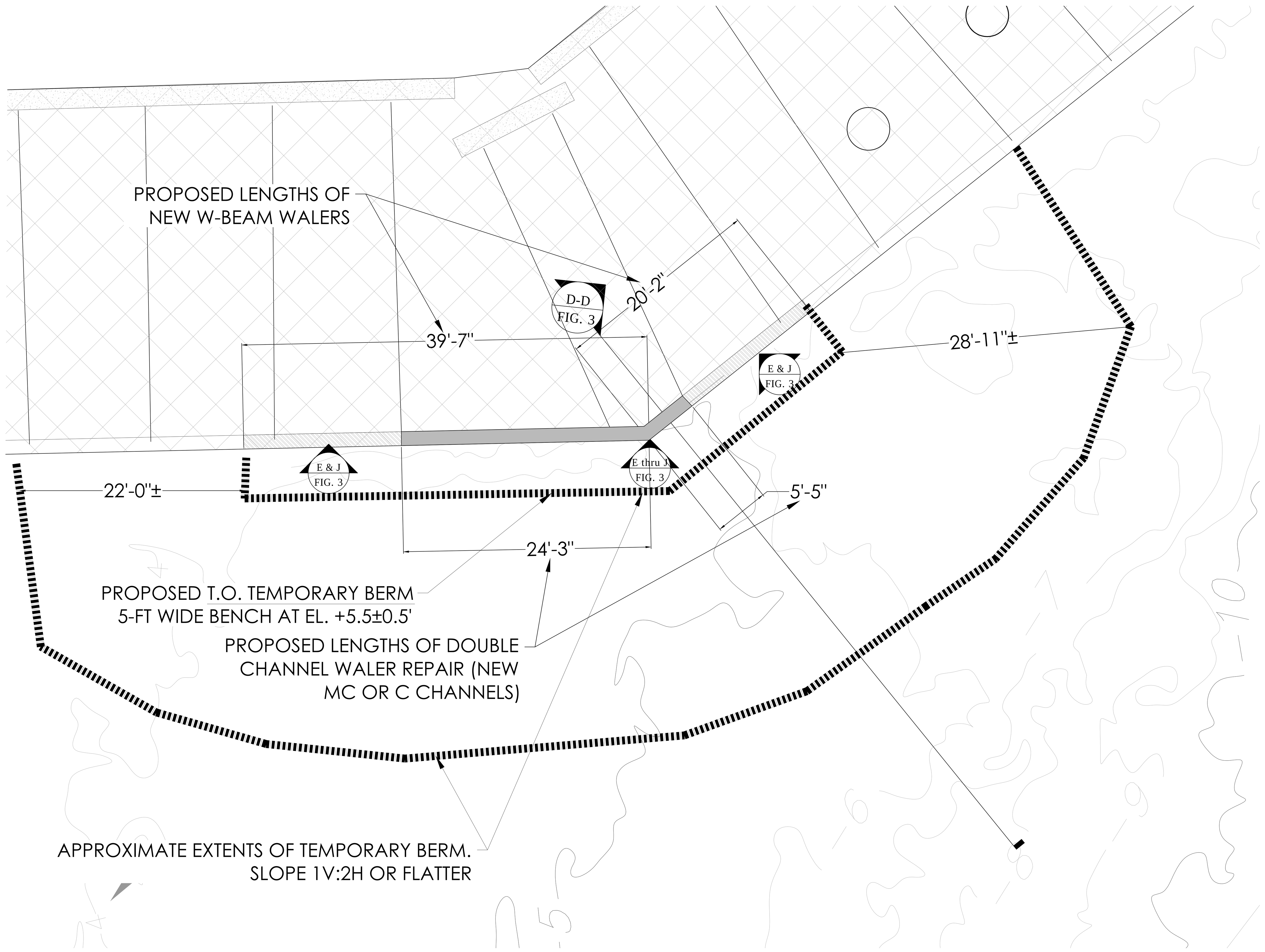
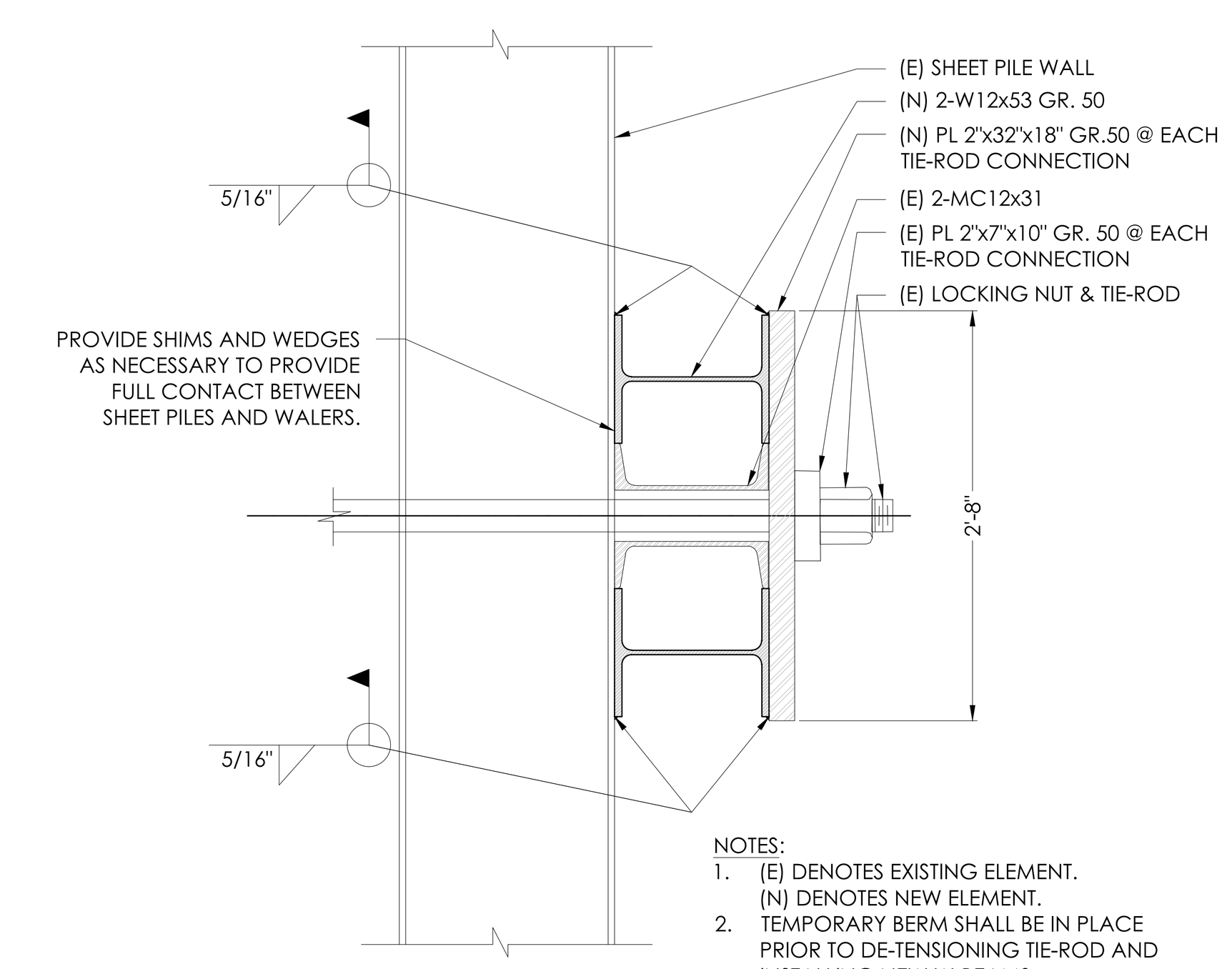
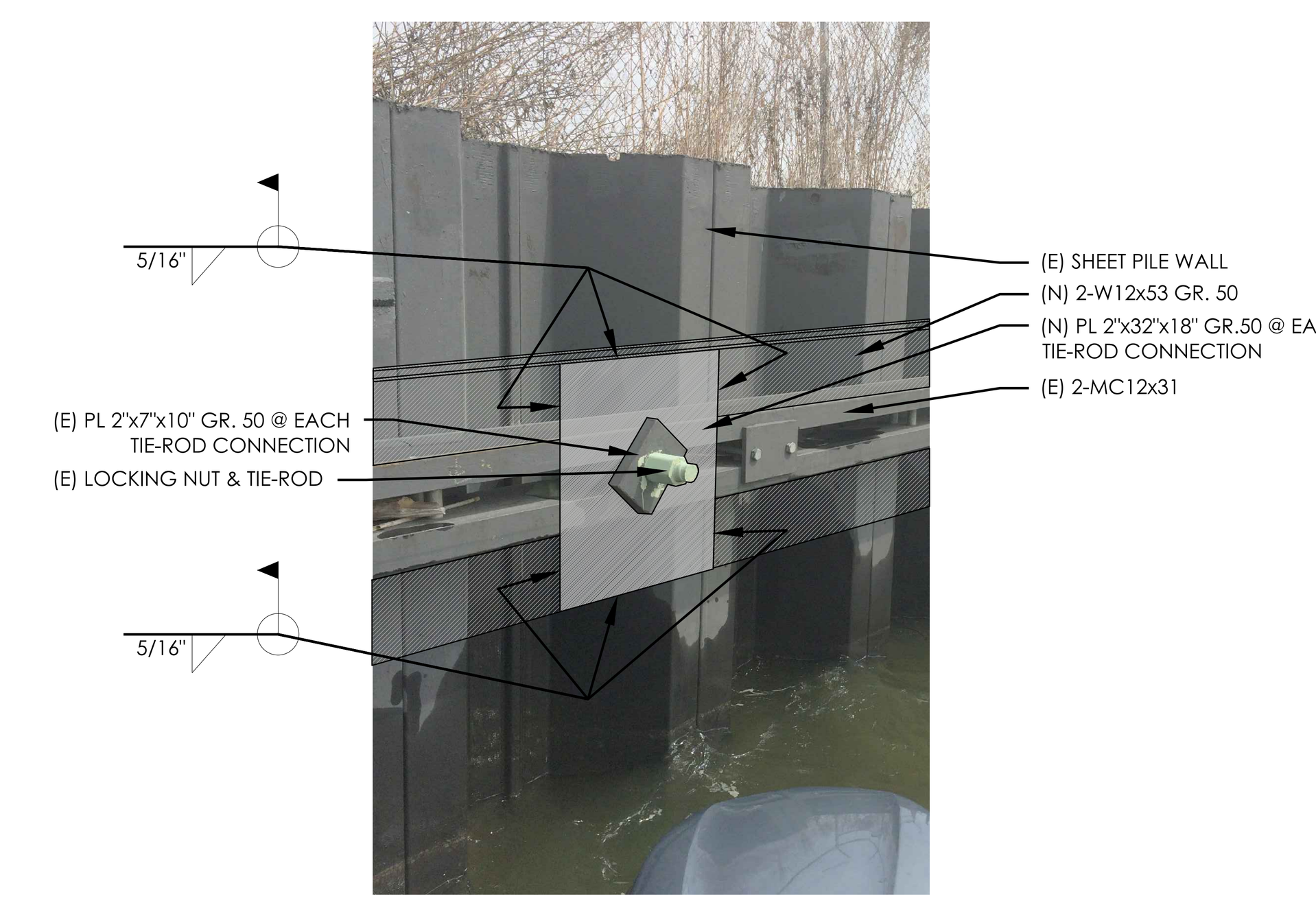


2 PARTIAL PLAN: WALER REPAIR ZONE
Scale: 3/16" = 1'-0"



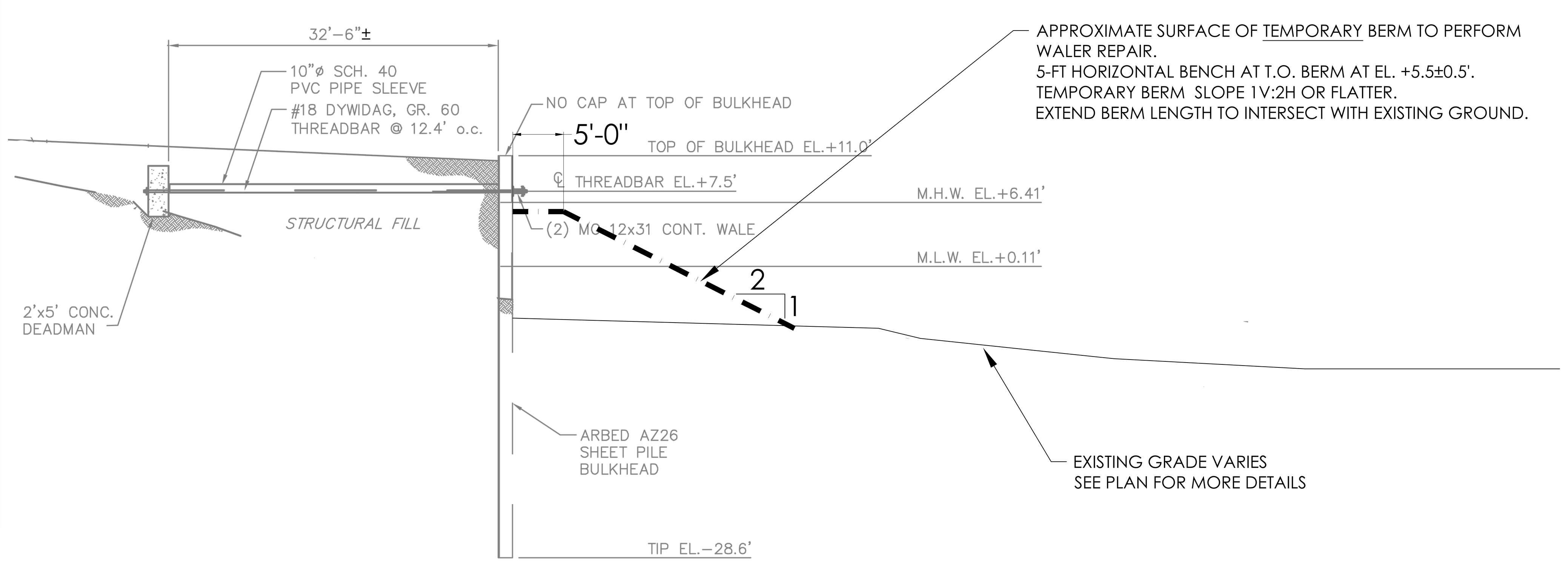
NOTES:
1. (E) DENOTES EXISTING ELEMENT. (N) DENOTES NEW ELEMENT.
2. TEMPORARY BERM SHALL BE IN PLACE PRIOR TO DE-TENSIONING TIE-ROD AND INSTALLING NEW W-BEAMS.
3. EXISTING SPACER BOLTS MAY BE REMOVED AS NECESSARY IF THEIR LOCATION INTERFERES WITH WALER REPAIR OR REINFORCEMENT.
4. AFTER W-BEAM AND PLATE INSTALLATION, TIE-RODS SHALL BE PROOF TESTED IN ACCORDANCE WITH THE NOTES ON FIG-001 AND TO THE LOADS SHOWN ON FIG-002.

WALER REINFORCEMENT DETAIL (E)
SCALE: 1" = 1'-0"



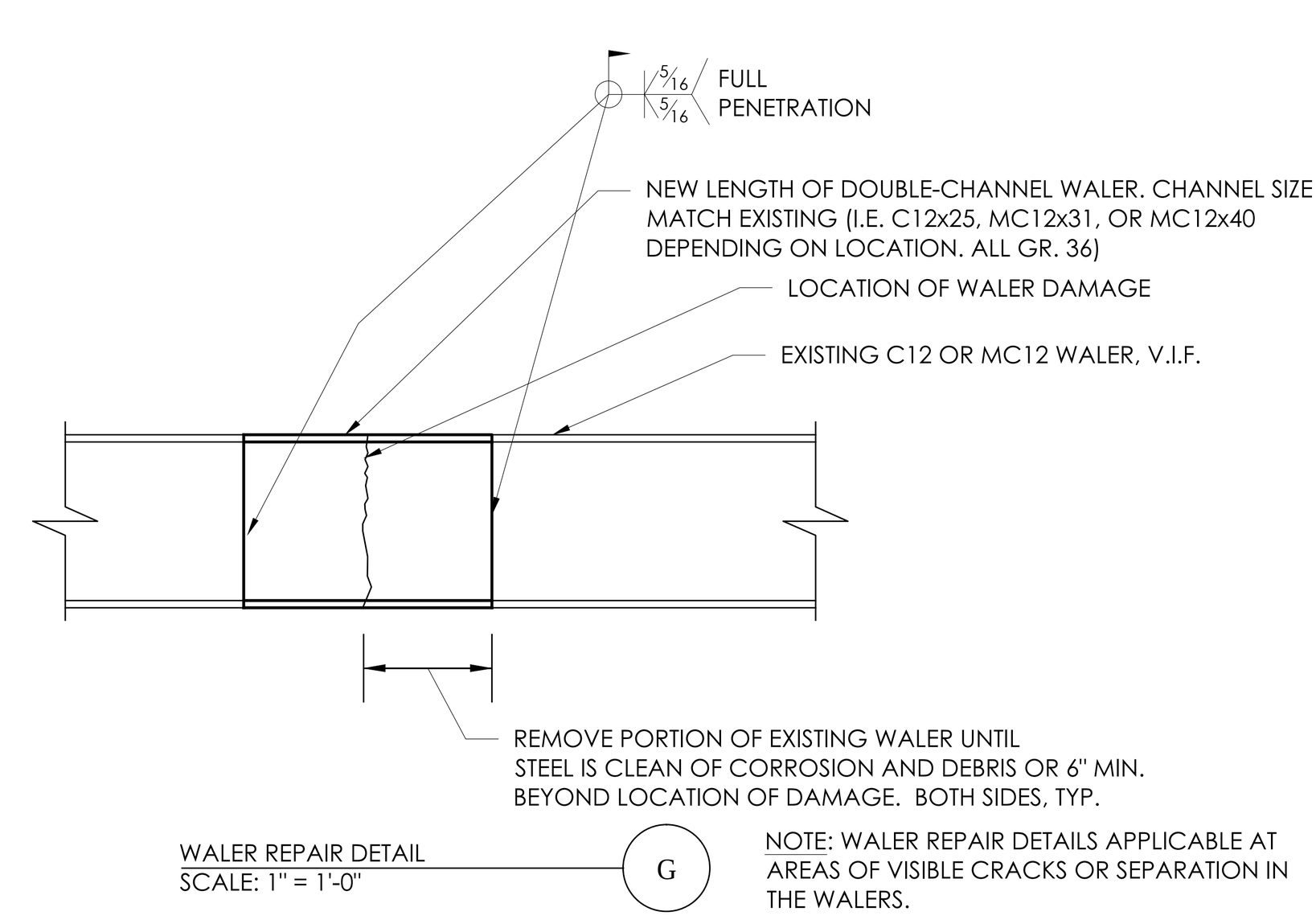
WALER REINFORCEMENT SCHEMATIC (J)
NOT TO SCALE

NOTES:
1. REFER TO DETAIL "E" FOR NOTES.



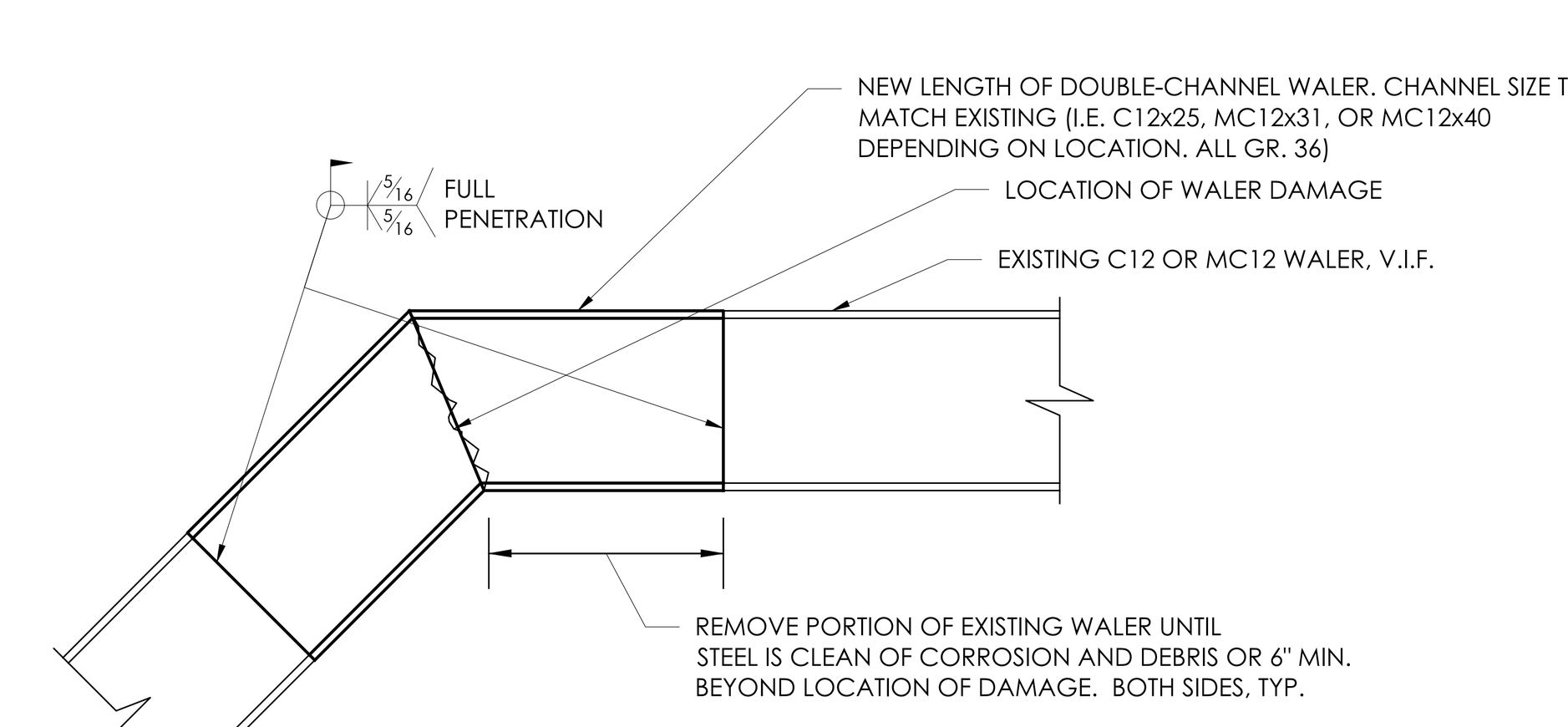
D-D SECTION
Scale: 1/8" = 1'-0"

NOTE:
1. AS AN ALTERNATIVE, CONTRACTOR MAY CHOOSE TO ADD TEMPORARY BERM & BENCH ON TOP OF PERMANENT BERM. ALTERNATIVE APPROACHES MAY BE PRESENTED BY CONTRACTOR IN SUBMITTAL 7.



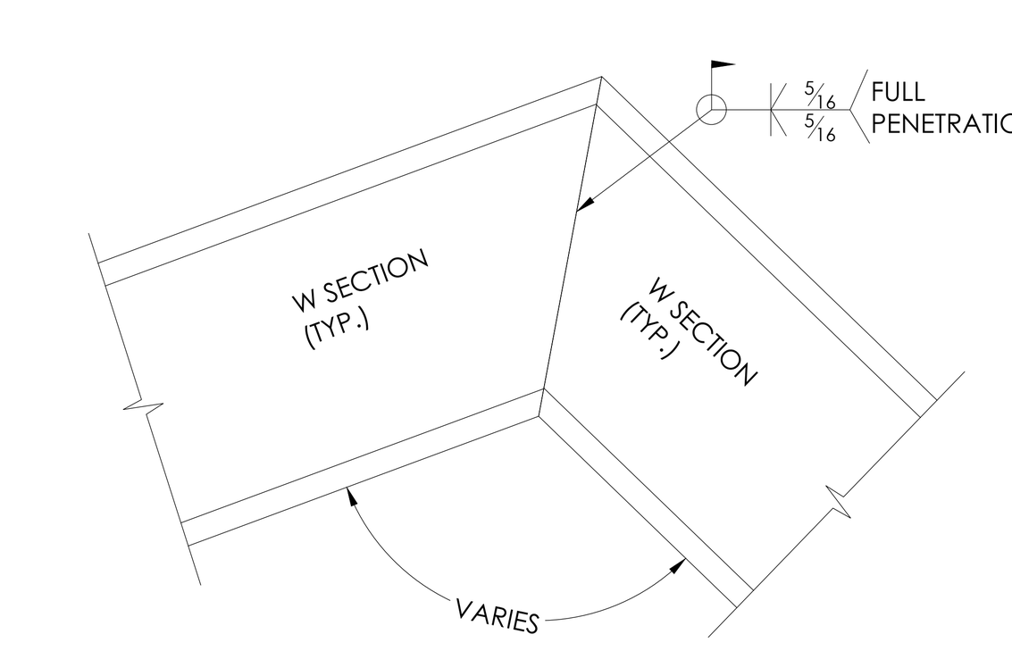
WALER REPAIR DETAIL (G)
SCALE: 1" = 1'-0"

NOTE: WALER REPAIR DETAILS APPLICABLE AT AREAS OF VISIBLE CRACKS OR SEPARATION IN THE WALERS.



WALER REPAIR DETAIL (H)
SCALE: 1" = 1'-0"

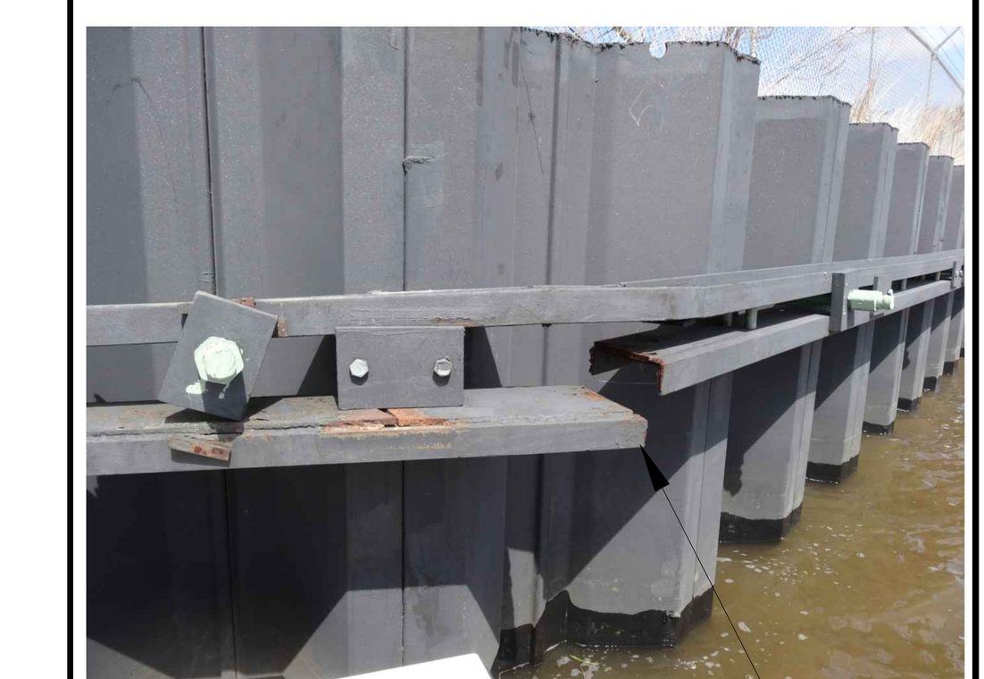
NOTE: WALER REPAIR DETAILS APPLICABLE AT AREAS OF VISIBLE CRACKS OR SEPARATION IN THE WALERS.



NEW WALER CONNECTION DETAIL (F)
NOT TO SCALE

KEY PLAN

NOT TO SCALE



PHOTOS SHOWING EXAMPLE OF BROKEN WALER AT CORNER OF SHEET PILE WALL

REV.	DATE	DETAILS
	7/24/15	REVISED REPAIR DETAILS
	4/16/15	REVISED REPAIR DETAILS
	3/6/15	NEW BATHYMETRIC SURVEY

PROJECT
METAL BANK SITE
PHILADELPHIA, PA

TITLE
WALER REPAIR PLAN, SECTIONS, AND DETAILS

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DATE: 1 OCTOBER, 2014
PROJ. NO.: 12C1135
DRAWN BY: JR / JJC
CHECKED BY: WJP
DRAWING: FIGURE 3
SHEET: SHEET 3 OF 4

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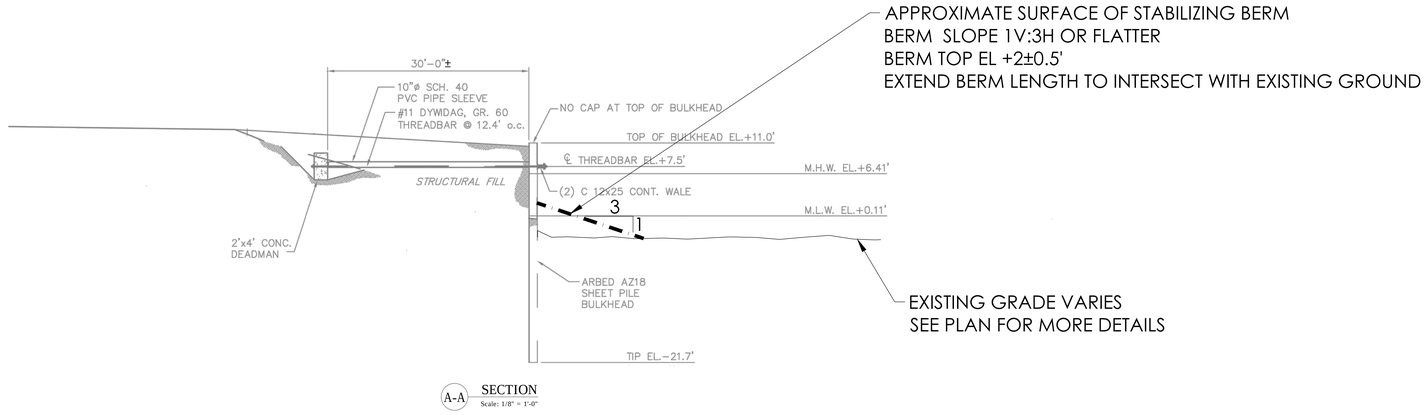
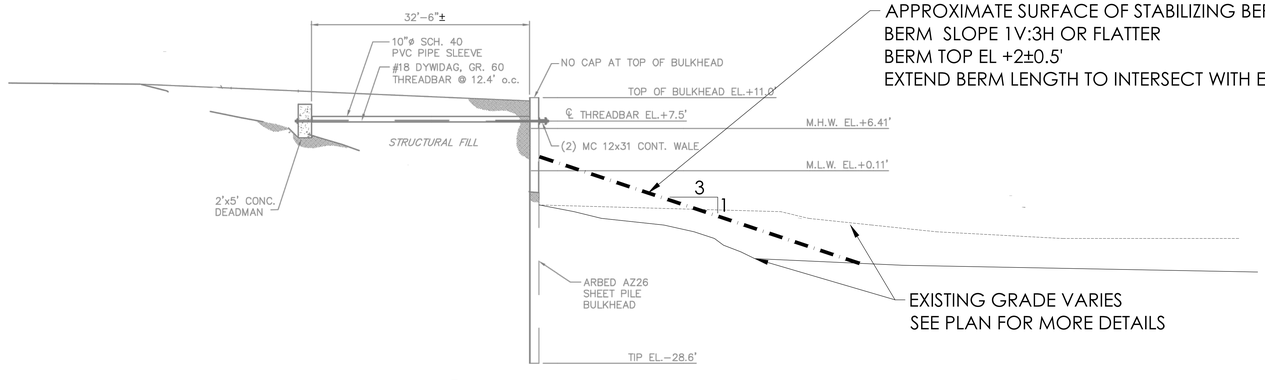
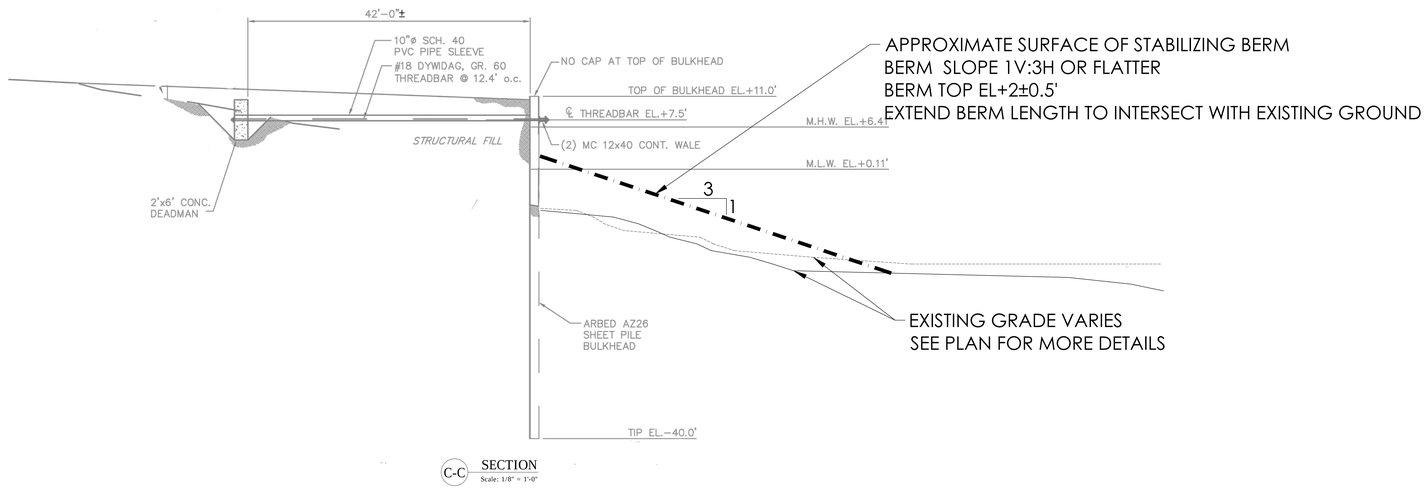


A-A SECTION
Scale: 1/8" = 1'-0"



B-B SECTION
Scale: 1/8" = 1'-0"



C-C SECTION
Scale: 1/8" = 1'-0"

NOTES:

1. STABILIZING BERM SHALL CONSIST OF R6 NATURAL CRUSHED STONE OR APPROVED ALTERNATIVE. MATERIAL SHALL BE REVIEWED AND APPROVED BY ENVIRONMENTAL TEAM.
2. THE BERM SHALL BE CONSTRUCTED WITHIN A TOLERANCE OF ±6-INCHES TO THE SHOWN BENCH AND SLOPE.

KEY PLAN

NOT TO SCALE

REV.	DATE	DETAILS
	7/24/15	REVISED REPAIR DETAILS
	4/16/15	REVISED REPAIR DETAILS
	3/6/15	NEW BATHYMETRIC SURVEY

PROJECT
METAL BANK SITE
PHILADELPHIA, PA

TITLE
STABILIZING BERM
SECTIONS

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